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AMENDMENTS TO THE CLAIMS:

1. (Previously Presented) A cross shaft comprising:

a trunnion;

a roller bearing externally provided at the trunnion; and

a recess formed at a distal end face of the trunnion, wherein a bottom region of the recess comprises a spherical shape and a size of an opening region of the recess except the bottom region gradually increases toward an opening end of the recess. ~~has a spherical shape different from the spherical shape of the bottom region.~~

2. (Previously Presented) The cross shaft according to claim 1, wherein the trunnion is provided on an outer peripheral face thereof with a plurality of bearing rolling faces which are reduced in diameter from a root thereof toward a distal end thereof.

3. (Previously Presented) The cross shaft according to claim 1, wherein an inner diameter of the opening end edge of the recess is in a range from about 50% to 80% of an outer diameter of the distal end of the trunnion.

4. (Previously Presented) The cross shaft according to claim 2, wherein the cross shaft comprises carburized steel and a roller burnishing process is applied to the bearing rolling face.

5. (Previously Presented) The cross shaft according to claim 1, wherein the cross shaft comprises four trunnions and four roller bearings respectively mounted on the four trunnions.

6. (Previously Presented) The cross shaft according to claim 1, wherein the roller bearing comprises rollers arranged in a plurality of rows in parallel in an axial direction of the trunnion and crownings in a curved shape are formed at both ends of each of the rollers on an outer peripheral face thereof.

7. (Currently Amended) The cross shaft according to claim 1, wherein the bottom region ~~in the spherical shape~~ has a central angle which is in a range from about 120 degrees to 160 degrees.

8. (Currently Amended) The cross shaft according to claim 1, wherein the bottom region ~~in the spherical shape~~ has a radius of curvature which is 50% or less of the inner diameter of the opening end ~~edge~~ of the recess.

9. (Previously Presented) The cross shaft according to claim 1, wherein a depth of the recess from the opening end edge to a deepest point of the bottom region is in a range from about 30% to 70% of a total length of the roller bearing in the axial direction.

10. (Previously Presented) A cross shaft comprising:

a trunnion;

a roller bearing externally provided on the trunnion comprising rollers arranged in a plurality of rows in parallel in an axial direction of the trunnion;

a plurality of bearing rolling faces corresponding to the plurality of rows of rollers provided on an outer peripheral face of the trunnion reduced in diameter from a root of the trunnion toward a distal end of the trunnion; and

a recess formed at a distal end face of the trunnion, wherein the recess comprises a bottom region comprising a spherical shape and an opening region comprising a tapered shape opening toward an opening end edge of the recess.

11. (Previously Presented) The cross shaft according to claim 10, wherein a depth of the recess from the from the opening end edge to a deepest point of the bottom region is in a range from about 30% to 70% of a total length of the roller bearing in the axial direction.

12. (Previously Presented) The cross shaft according to claim 10, wherein the bottom region in the spherical shape has a central angle which is in a range from about 120 degrees to 160 degrees.

13. (Previously Presented) The cross shaft according to claim 10, wherein the bottom region in the spherical shape has a radius of curvature which is 50% or less of the inner diameter of the opening end edge of the recess.

14. (Previously Presented) The cross shaft according to claim 10, wherein an angle of the tapered shape of the opening region is in a range from about 10 degrees to 30 degrees.

15. (Currently Amended) The cross shaft according to claim [[10]] 1, wherein the opening region of the recess comprises a curved shape having an inner diameter gradually increasing toward the opening end ~~edge~~ of the recess.

16. (Currently Amended) The cross shaft according to claim 10, wherein a difference in outer diameters of adjacent rolling faces within the plurality of bearing rolling faces is in a range from about 0.1% to 0.5% of a diameter of the rollers.

17. (Previously Presented) The cross shaft according to claim 10, wherein a radial clearance between the rollers and the rolling faces of each of the plurality of rows is increased from the root of the trunnion toward the distal end of the trunnion

18. (Currently Amended) A cross shaft comprising:

a trunnion;

a roller bearing externally provided on the trunnion comprising rollers arranged in a plurality of rows in parallel in an axial direction of the trunnion; and

a plurality of bearing rolling faces corresponding to the plurality of rows of rollers provided on an outer peripheral face of the trunnion, the plurality of bearing rolling

faces being reduced in diameter from a root of the trunnion toward a distal end of the trunnion,

wherein a radial clearance between the rollers and the rolling faces is increased for each of the plurality [[or]] of rows from the root of the trunnion toward the distal end of the trunnion and diameters of the rollers comprising the roller bearing are the same.

19. (Previously Presented) The cross shaft according to claim 18, wherein a difference in outer diameters of adjacent rolling faces is in a range from about 0.1% to 0.5% of a diameter of the rollers.

20. (Currently Amended) The cross shaft according to claim 1, wherein the opening region [[has]] of the recess comprises a tapered shape opening toward the opening end of the recess.